Determination of Public Land (Rangeland) Health for 61008 GALLINA WELLS

The Record of Decision (ROD) for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management (dated January 2001) adopted three Standards for Public Land Health. These are (1) Upland Sites Standard, (2) Biotic Communities, Including Native, Threatened, Endangered, and Special Status Species Standard and (3) Riparian Sites Standard.

The ROD also established a process for the BLM Field Offices for the implementation. Through a public participation process, the Roswell Field Office developed and adopted indicators to use in conjunction with existing monitoring data to assess these standards.

Field assessment worksheets and other available data that evaluate the local indicators were completed for this allotment. Based on these assessments, it is my determination that public land within Gallina Wells, allotment #61008, meets the Upland Sites standard and (2) Biotic Communities, including Native, Threatened, Endangered, and Special Status Species standard. There are no public land Riparian areas on this allotment, therefore this standard was not addressed.

/s/ Eddie Bateson	8/8/2006
Field Manager	Date

Standards of Public Land Health
Evaluation of 61008 GALLINA WELLS Allotment
[10/15/2005]

The Roswell Field Office conducted rangeland health assessments at two (2) study sites within the Gallina Wells allotment #61008. These assessments evaluated Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within each study site location and surrounding vicinity. Existing monitoring data was incorporated into and in support of these field assessments. A summary of each assessment is attached and shown in the following table.

Study Area or Assessment Area	UPLAND			BIOTIC			RIPARIAN		
	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet
61008-#10-A007	X			X			N/A		
61008-#14-A178	X			X			N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for public land on Gallina Wells, allotment #61008. Ten (10) of these assessed soil site stability, 11 hydrologic function and 13 biotic integrity. These qualitative assessments in conjunction with previous data collected on two locations within this allotment were utilized to make rangeland health determinations. This allotment is a "C" (custodial) management category due to small amounts of public land present.

Two sites were evaluated on this allotment situated in Roosevelt county. The first is a HP-3 Sandy Plains ecological site in Pasture #10 on 1,415 acres/573 hectares. The soil phase is Brownfield fine sand on 0 to 3 percent slopes. It is underlain by a strongly calcareous substratum of undetermined thickness with good internal drainage. Indicators of concern rating Moderate are invasive plants and wildlife/special status species habitat. Snakeweed (Gutierrezia sarothrae) and yucca (Yucca spp.) are both scattered throughout but pose no threat of immediate encroachment. Larger clumps of little and sand bluestem (Schizachyrium scoparium) and (Andropogon halli) respectively, are lacking for lesser prairie chicken (Tympanuchus pallidicinctus) nesting cover. Therefore a portion of habitat is in less than satisfactory condition. Annual production is favorable for this site however along with a generous organic matter surface layer resulting in mulch from litter produced. This is condusive to soil site protection and reduced erosion potential. All other indicators fell within normal range of variability indicating None to Slight and Slight to Moderate deviations from established parameters.

Pasture #14 is the other site on this allotment. Ecological site is HP-3 Deep Sand on 1,416 acres/573 hectares. Soil phase is Tivoli consisting of deep loose sand in northern and southern parts of Roosevelt county. Relief is rolling and dunelike with sand that is noncalcareous and permanently moist below a depth of 24 in/61 cm. Slopes are 5 to 25 percent. All indicators evaluated here fell well within normal range of variability. Degree of departure from reference areas was minimum. Sand bluestem and shinnery oak (Quercus havardii) ratio was at 65:35 indicating favorable conditions for lesser prairie chicken nesting habitat. Larger grass clumps of bluestem indicate a greater potential for these birbs to nest. This site also exhibits greater diversity of plants with blue grama (Bouteloua gracilis), black grama (Bouteloua eriopoda), sand sage (Artemesia filifolia), dropseed (Sporobolus spp.), hairy grama (Bouteloua hirsuta) and sideoats (Bouteloua curtipendula) in increased amounts. Litter amount was estimated comparable to Pasture #10 with higher annual production estimates.

In the professional opinion of the Assessment Team, public land within Gallina Wells, allotment #61008 meets Upland and Biotic standards. There are no Riparian areas within this allotment therefore this standard was not addressed. See site notes and recommendations for further information pertinent to this allotment.

Recommendations: This allotment is in good to excellent ecological condition. Current management of these pastures for livestock should continue with conservative utilization levels as standard. No brush concerns exist at present.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 61008-#10-A007			
Legal Land Desc	SENE 19 0070S 0330E Meridian 23	Acreage	1415
Ecosite	077CY056NM SANDY PLAINS HP-3	Photo Taken	Y
Watershed	12050001080 LINGO		
Observers	ARTHUN/MOE	Observation Date	12/27/2005
County Soil Survey	NM041 ROOSEVELT	Soil Var/Taxad	
Soil Map Unit	Be	Soil Taxon Name	BROWNFIELD
Texture Class	NM041 FS	Soil Phase	BROWNFIELD
Texture Modifier	NM041 FINE SAND		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	19.55	NOAA Growing Season Precipitation	15.86
NOAA Avg Annual Precipitation	15.73	NOAA Avg Growing Season Precipitation	13.34
Disturbances and Animal Use:			

Part 2. Attributes and Indicators						
		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground				X	
Comments:	Current estimate is 30%.					
S H	Gullies					X
Comments:						

S	Wind-scoured, Blowouts, and/or Deposition Areas				X	
Comments:						
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion				X	
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:						
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups				X	
Comments:						
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	Current estimate is 70%.					
B	Annual Production				X	
Comments:	Current estimate is 700 lbs/ac or kg/ha.					
B	Invasive Plants			X		
Comments:	Snakeweed and yucca are scattered.					
B	Reproductive Capability of Perennial Plants				X	
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical/biological crusts observed.					
B	Wildlife Habitat				X	
Comments:						
B	Wildlife Populations				X	

Comments:	Good deer -					
B	Special Status Species Habitat			X		
Comments:	lack of grass clumps for nesting					
B	Special Status Species Populations				X	
Comments:	Good pop LPC					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	7	3
H	Hydrologic	0	0	0	7	4
B	Biotic	0	0	2	8	3

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	0	10
Hydrologic		0	0	11
Biotic		0	2	11

Site Notes: This site is in good ecological condition: a mixture of grass species along with shrubs and forbs is sufficient for diversity.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 61008-#14-A178			
Legal Land Desc	NWSW 27 0070S 0330E Meridian 23	Acreage	1416
Ecosite	077CY058NM DEEP SAND HP-3	Photo Taken	Y
Watershed	12050001080 LINGO		
Observers	ARTHUN/MOE	Observation Date	12/27/2005
County Soil Survey	NM041 ROOSEVELT	Soil Var/Taxad	
Soil Map Unit	Tf	Soil Taxon Name	TIVOLI
Texture Class	NM041 FS	Soil Phase	TIVOLI
Texture Modifier	NM041 FINE SAND		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	19.55	NOAA Growing Season Precipitation	15.86
NOAA Avg Annual Precipitation	15.73	NOAA Avg Growing Season Precipitation	13.34
Disturbances and Animal Use:			

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns				X	
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments:						
S H	Bare Ground				X	
Comments:	30% is the current estimate					
S H	Gullies					X
Comments:						

S	Wind-scoured, Blowouts, and/or Deposition Areas				X	
Comments:						
H	Litter Movement				X	
Comments:						
S H B	Soil Surface Resistance to Erosion				X	
Comments:						
S H B	Soil Surface Loss or Degradation				X	
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff					X
Comments:						
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups					X
Comments:						
B	Plant Mortality/Decadence					X
Comments:						
H B	Litter Amount					X
Comments:	80% is the current estimate					
B	Annual Production				X	
Comments:	700 lbs/ac or kg/ha is the current estimate.					
B	Invasive Plants				X	
Comments:						
B	Reproductive Capability of Perennial Plants					X
Comments:						
S	Physical/Chemical/Biological Crusts				X	
Comments:	Physical/biological crusts were observed.					
B	Wildlife Habitat					X
Comments:	Lots of sand bluestem and oak.					
B	Wildlife Populations					X

Comments:	good deer					
B	Special Status Species Habitat					X
Comments:	lots of sand bluestem for nesting					
B	Special Status Species Populations					X
Comments:	good pop. LPC					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	7	3
H	Hydrologic	0	0	0	6	5
B	Biotic	0	0	0	4	9

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info,* and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		0	0	10
Hydrologic		0	0	11
Biotic		0	0	13

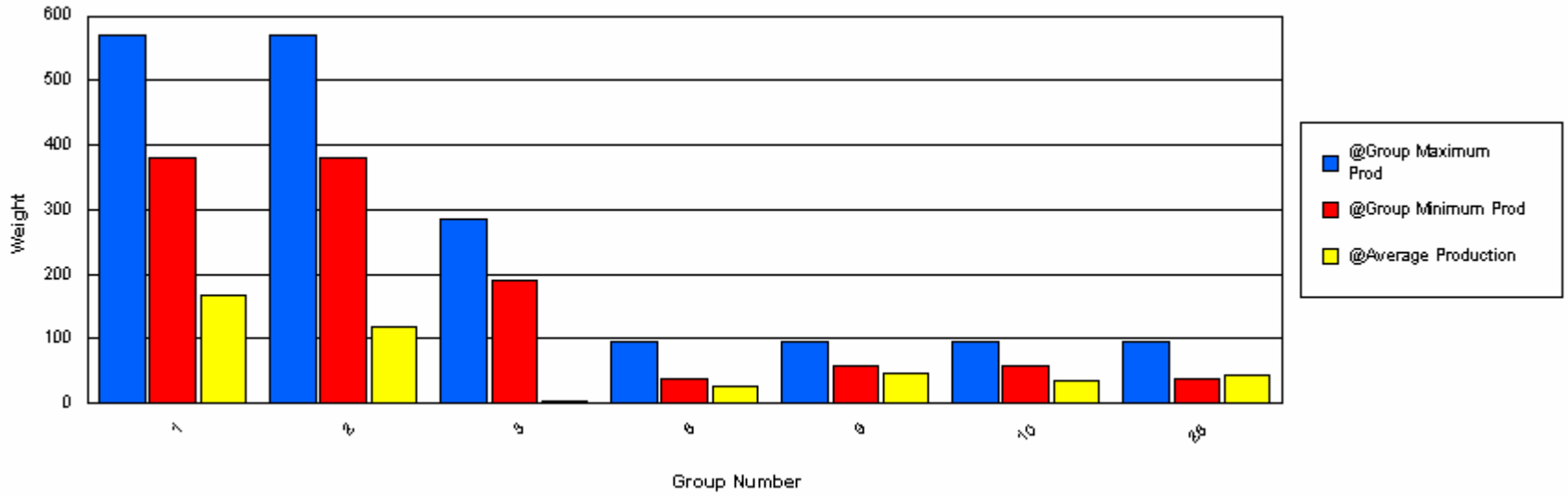
Site Notes: This site is very diverse: all grama species observed along with sage, shinnery, sand bluestem, threeawns,and dropseeds. The ratio of grass/oak is 65:35. Sand bluestem is very favorable from a wildlife standpoint.

Functional / Structural Groups

Report Parameters	
SITE NAME LIKE	61008-#14-A178
ON/AFTER	10/01/1990
ON/BEFORE	09/30/2005
MIN LBS TO GRAPH	1
SELECTED ECOSITE	077CY058NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	SCSC	380	570	98.80	234.24	166.52	67.72
2	Grass	ANHA	380	570	113.68	121.52	117.60	3.92
3	Grass	BOCU	190	285	0.00	3.80	1.90	1.90
8	Grass	BOHI2	38	95	14.08	40.48	27.28	13.20
9	Grass	EROX	57	95	2.67	5.76	4.22	1.55
9	Grass	PAST6	57	95	7.33	76.44	41.89	34.56
10	Grass	ARIST	57	95	0.00	66.96	33.48	33.48
28	Shrub	GUSA2	38	95	27.20	56.88	42.04	14.84

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV

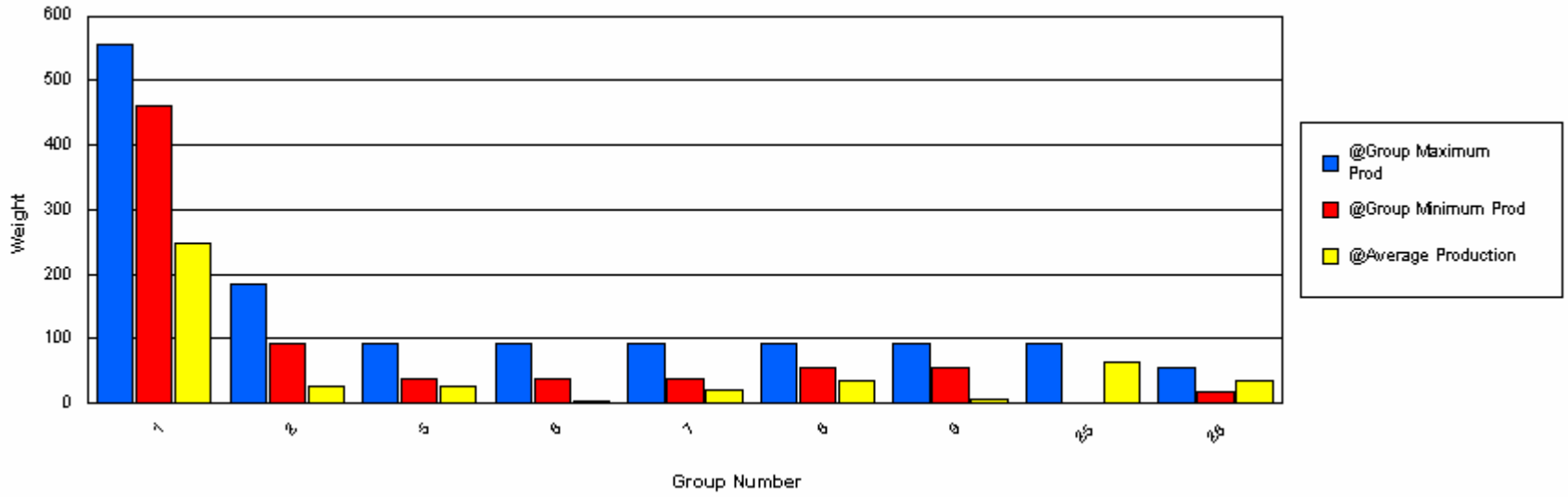


Functional / Structural Groups

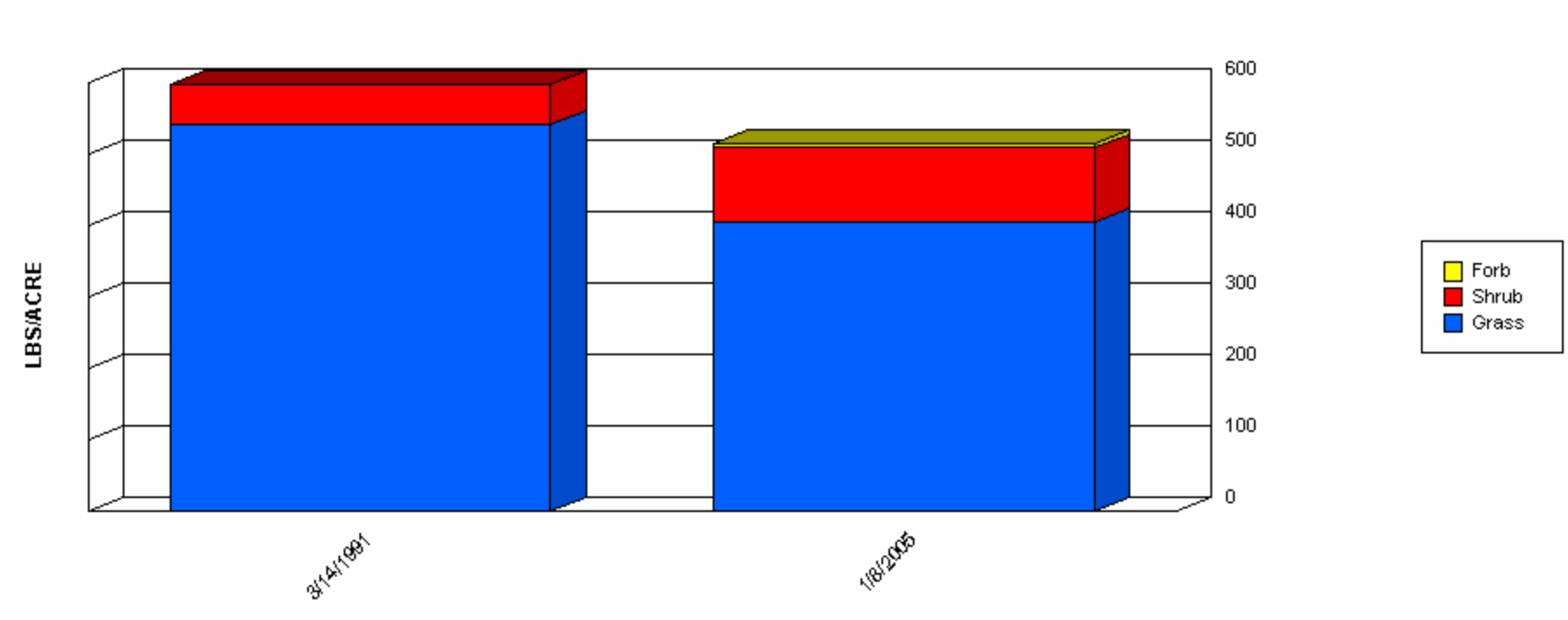
Report Parameters	
SITE NAME LIKE	61008-#10-A007
ON/AFTER	10/01/1990
ON/BEFORE	09/30/2005
MIN LBS TO GRAPH	1
SELECTED ECOSITE	077CY056NM

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV
1	Grass	ANSC2	462	555	70.30	426.24	248.27	177.97
2	Grass	ANHA	92	185	3.27	47.50	25.39	22.12
5	Grass	BOHI2	37	92	13.49	36.96	25.23	11.74
6	Grass	PAST6	37	92	0.00	5.88	2.94	2.94
7	Grass	EROX	37	92	0.00	3.84	1.92	1.92
7	Grass	LECO	37	92	11.34	23.70	17.52	6.18
8	Grass	ARIST	55	92	0.00	68.82	34.41	34.41
9	Grass	SPCR	55	92	3.64	7.89	5.77	2.13
25	Shrub	QUHA3	0	92	52.08	75.60	63.84	11.76
26	Shrub	GUSA2	18	55	26.86	41.37	34.12	7.26

Group	Plant Type	Species	Low Wt Allowed	High Wt Allowed	Minimum	Maximum	Average	STDEV



Production Lbs/Acre Trends

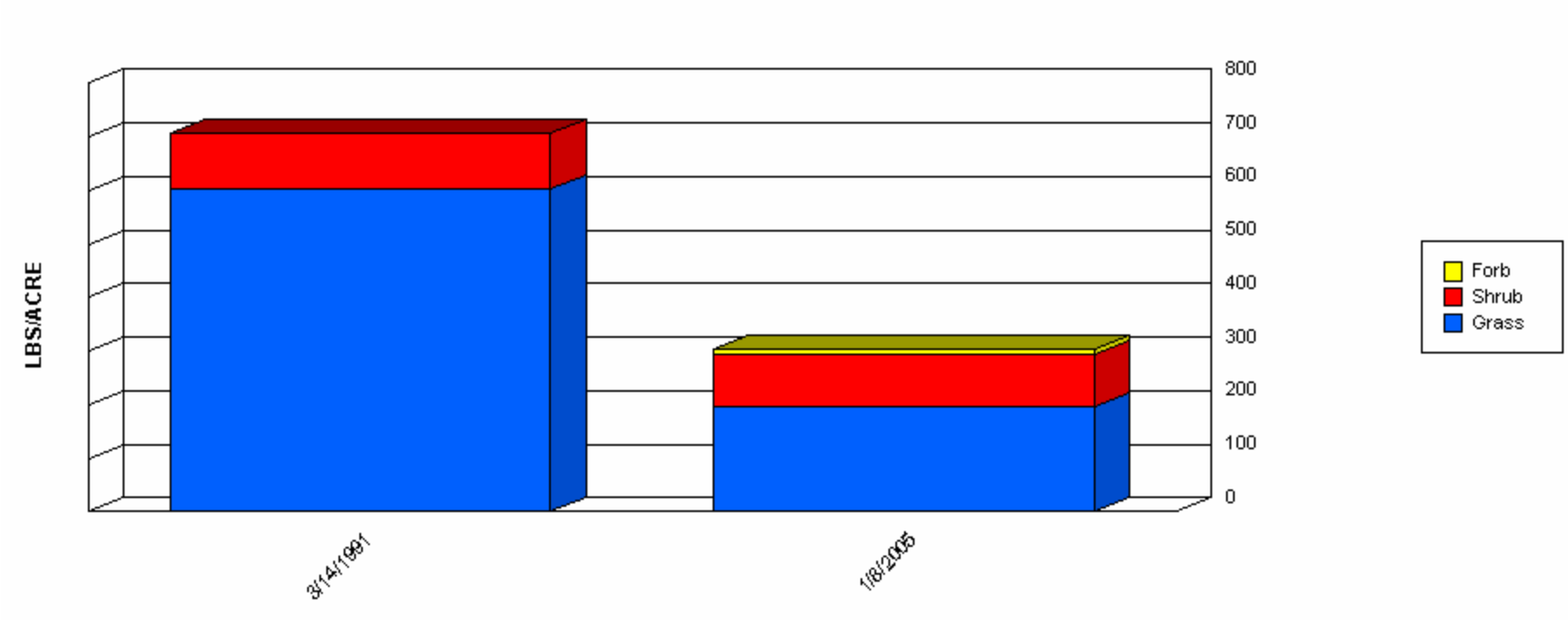


	3/14/1991	1/8/2005
Forb	**0.00**	**6.80**
Grass	**541.36**	**405.89**
Shrub	**56.88**	**103.46**
Total	**598.24**	**516.15**

Report Parameters

SITE NAME LIKE	61008-#14-A178
ON/AFTER	10/01/1990
ON/BEFORE	09/30/2005

Production Lbs/Acre Trends

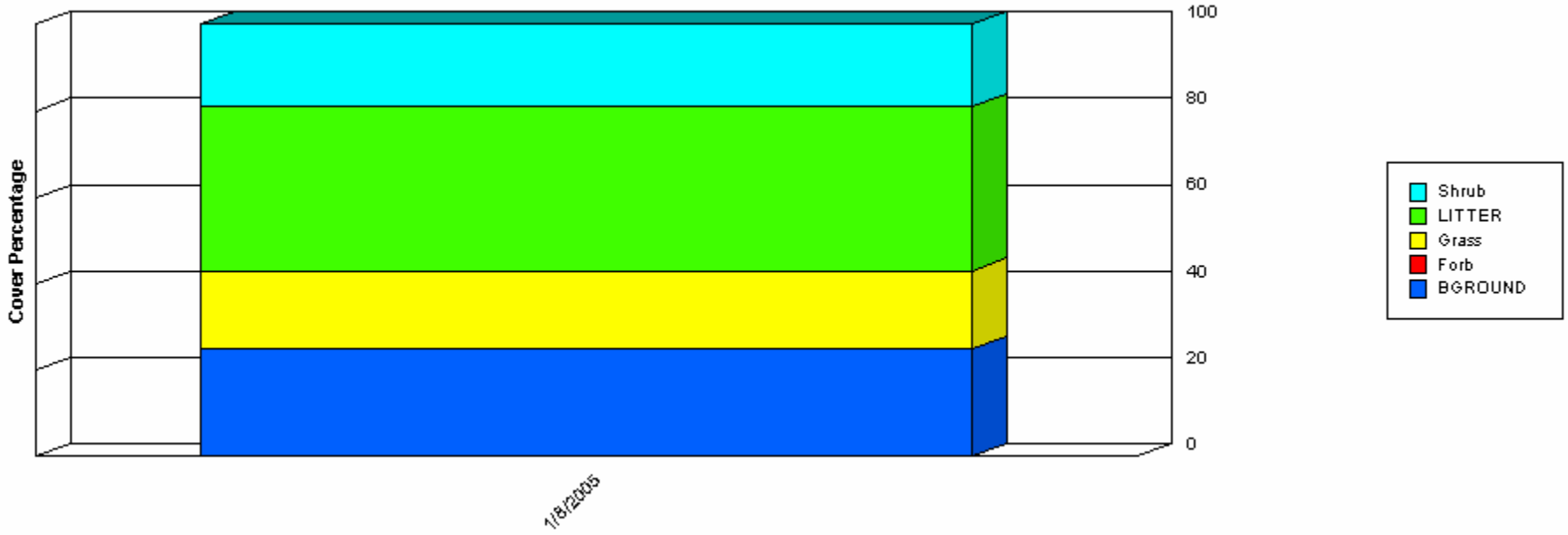


	3/14/1991	1/8/2005
Forb	**0.00**	**10.19**
Grass	**604.22**	**197.28**
Shrub	**102.46**	**97.45**
Total	**706.68**	**304.92**

Report Parameters

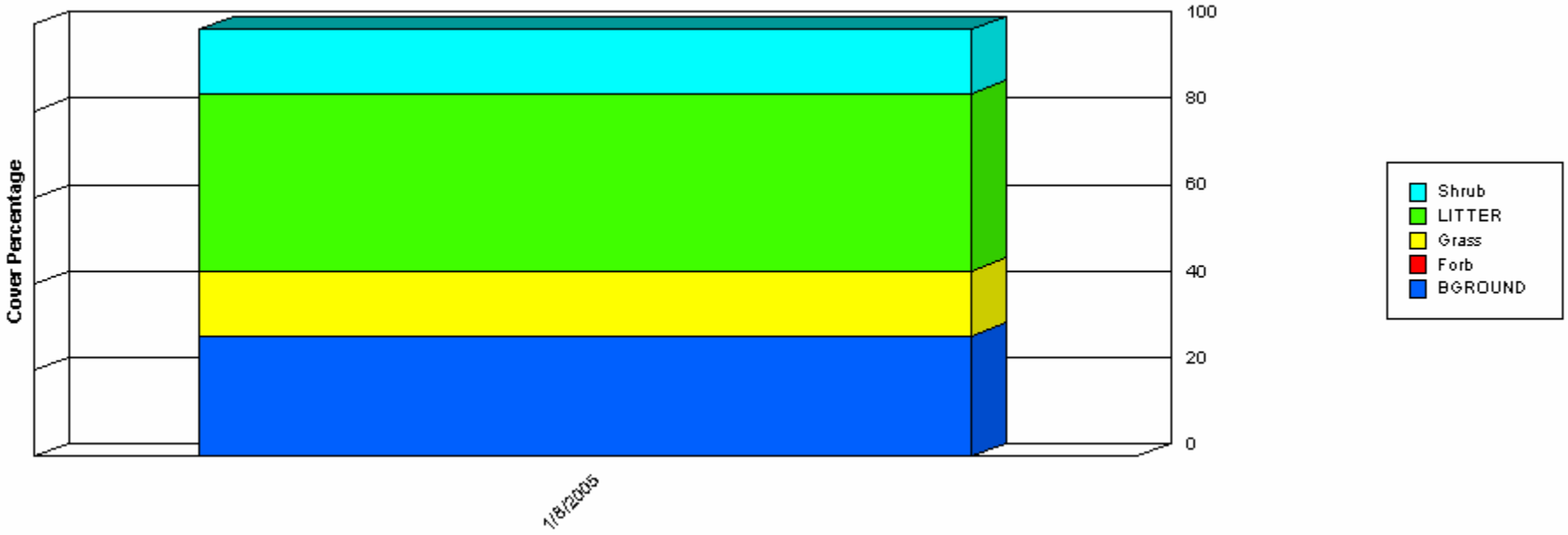
SITE NAME LIKE	61008-#10-A007
ON/AFTER	10/01/1990
ON/BEFORE	09/30/2005

Ground Cover Trends



	1/8/2005
BGROUND	25.00
Forb	0.00
Grass	18.00
LITTER	38.00
Shrub	19.00
Total	100.00

Ground Cover Trends



	1/8/2005
BGROUND	28.00
Forb	0.00
Grass	15.00
LITTER	41.00
Shrub	15.00
Total	99.00

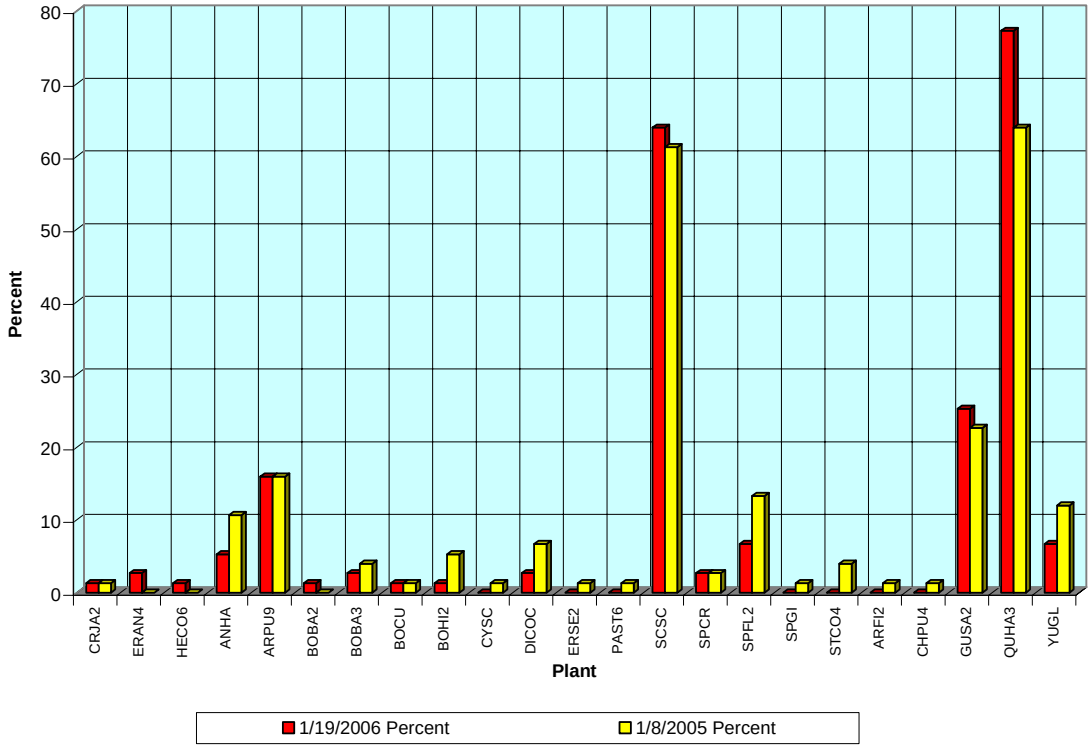
Robel Pole Summary over Time Report

Report Parameters
SITE NAME LIKE 61008-#10-A007
ON/AFTER 10/01/2004
ON/BEFORE 09/30/2006

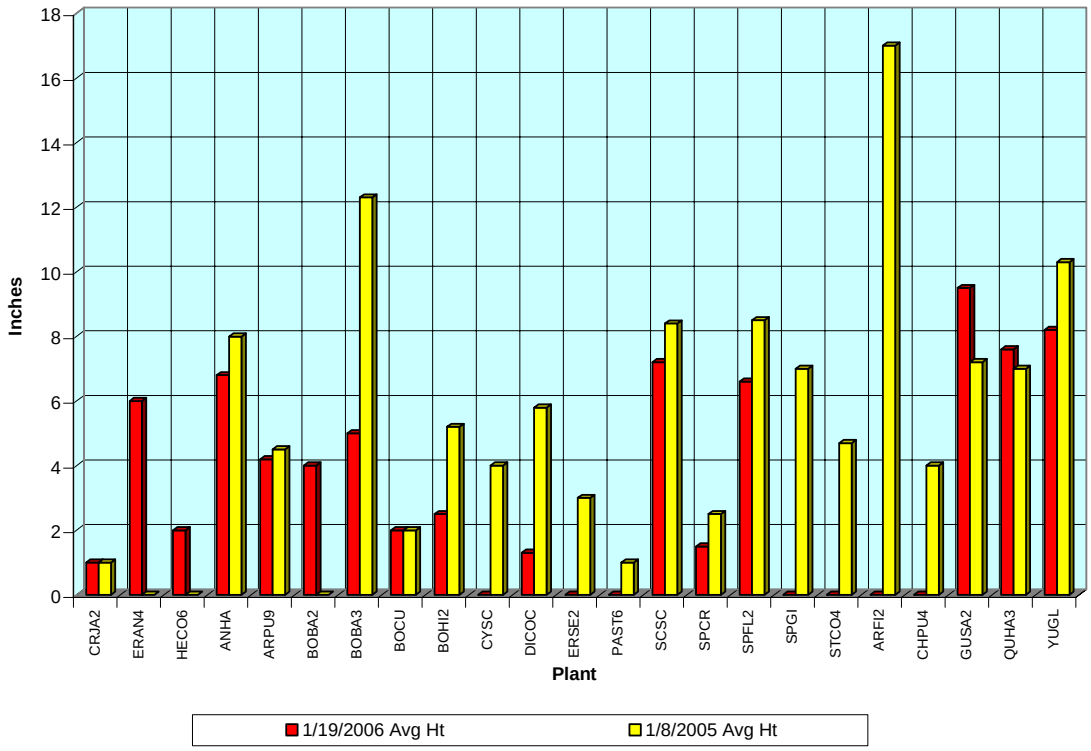
Primary Obstructions	**61008-#10-A007**	**61008-#10-A007**
	01/19/2006	**01/08/2005**
Flag Stations	0	0
	% Hits	% Hits
BGROUND	21.3 %	30.7 %
LITTER	49.3 %	45.3 %
GUSA2	5.3 %	2.7 %
QUHA3	6.7 %	4.0 %
ARPU9	2.7 %	2.7 %
BOHI2	4.0 %	1.3 %
DICOC	2.7 %	2.7 %
PAST6	0.0 %	1.3 %
SCSC	8.0 %	9.3 %

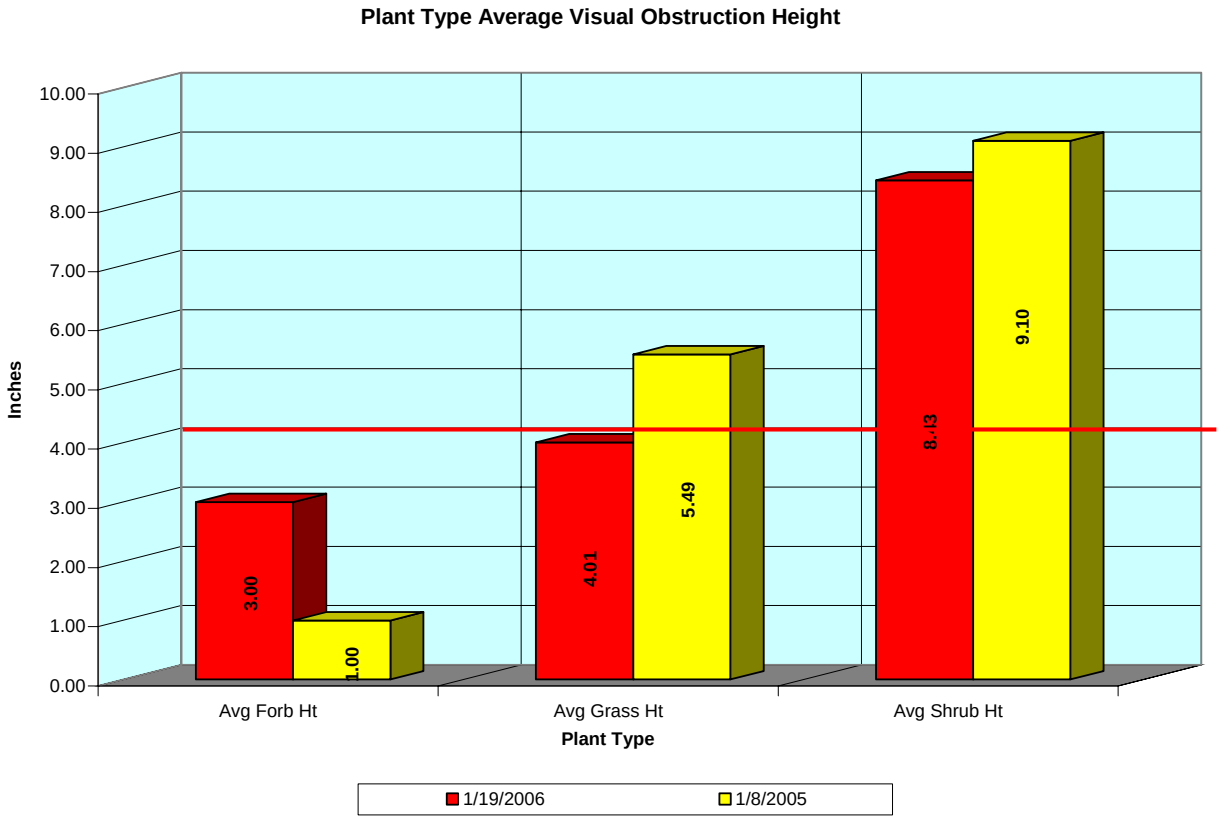
Secondary Obstructions	**61008-#10-A007**		**61008-#10-A007**	
	01/19/2006		**01/08/2005**	
	Percent	Avg Ht	Percent	Avg Ht
ANHA	5.3	6.8	10.7	8.0
ARFI2	0.0	0.0	1.3	17.0
ARPU9	16.0	4.2	16.0	4.5
BOBA2	1.3	4.0	0.0	0.0
BOBA3	2.7	5.0	4.0	12.3
BOCU	1.3	2.0	1.3	2.0
BOHI2	1.3	2.5	5.3	5.2
CHPU4	0.0	0.0	1.3	4.0
CRJA2	1.3	1.0	1.3	1.0
CYSC	0.0	0.0	1.3	4.0
DICOC	2.7	1.3	6.7	5.8
ERAN4	2.7	6.0	0.0	0.0
ERSE2	0.0	0.0	1.3	3.0
GUSA2	25.3	9.5	22.7	7.2
HECO6	1.3	2.0	0.0	0.0
PAST6	0.0	0.0	1.3	1.0
QUHA3	77.3	7.6	64.0	7.0
SCSC	64.0	7.2	61.3	8.4
SPCR	2.7	1.5	2.7	2.5
SPFL2	6.7	6.6	13.3	8.5
SPGI	0.0	0.0	1.3	7.0
STCO4	0.0	0.0	4.0	4.7
YUGL	6.7	8.2	12.0	10.3

Plant Composition



Plant Average Visual Obstruction Height




Plant Type Average Visual Obstruction Height
Inches
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
3.00
1.00
4.01
5.49
8.43
9.10
Avg Forb Ht
Avg Grass Ht
Avg Shrub Ht
Plant Type
1/19/2006
1/8/2005

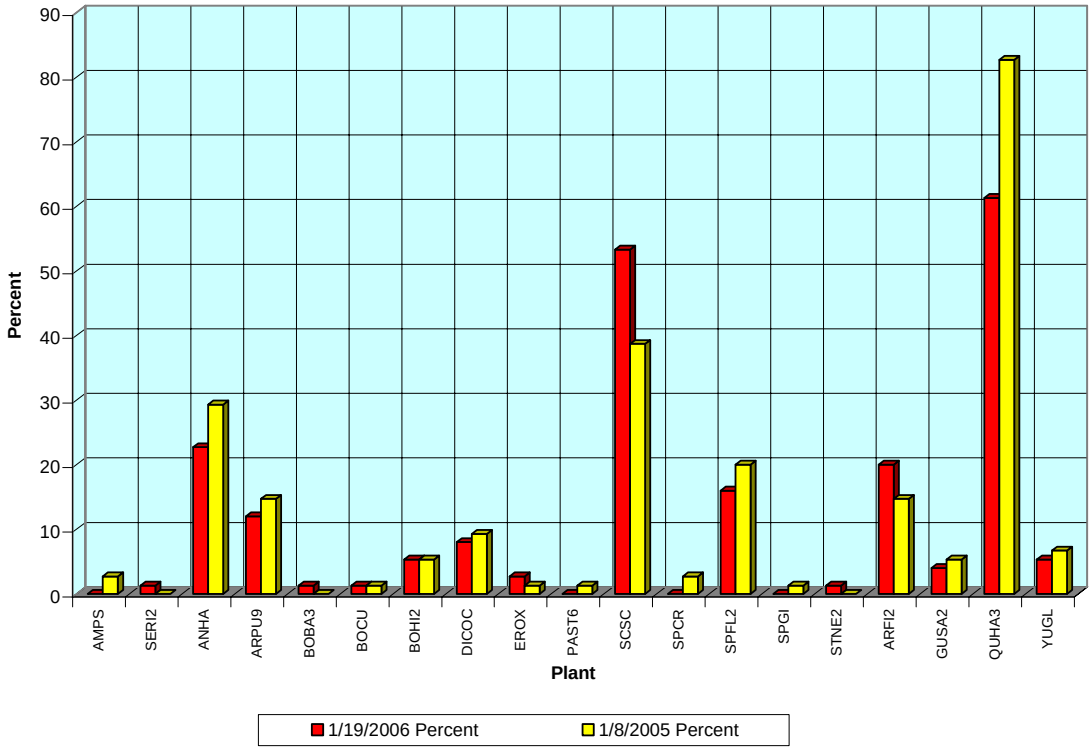
Robel Pole Summary over Time Report

Report Parameters
SITE NAME LIKE 61008-#14-A178
ON/AFTER 10/01/2004
ON/BEFORE 09/30/2006

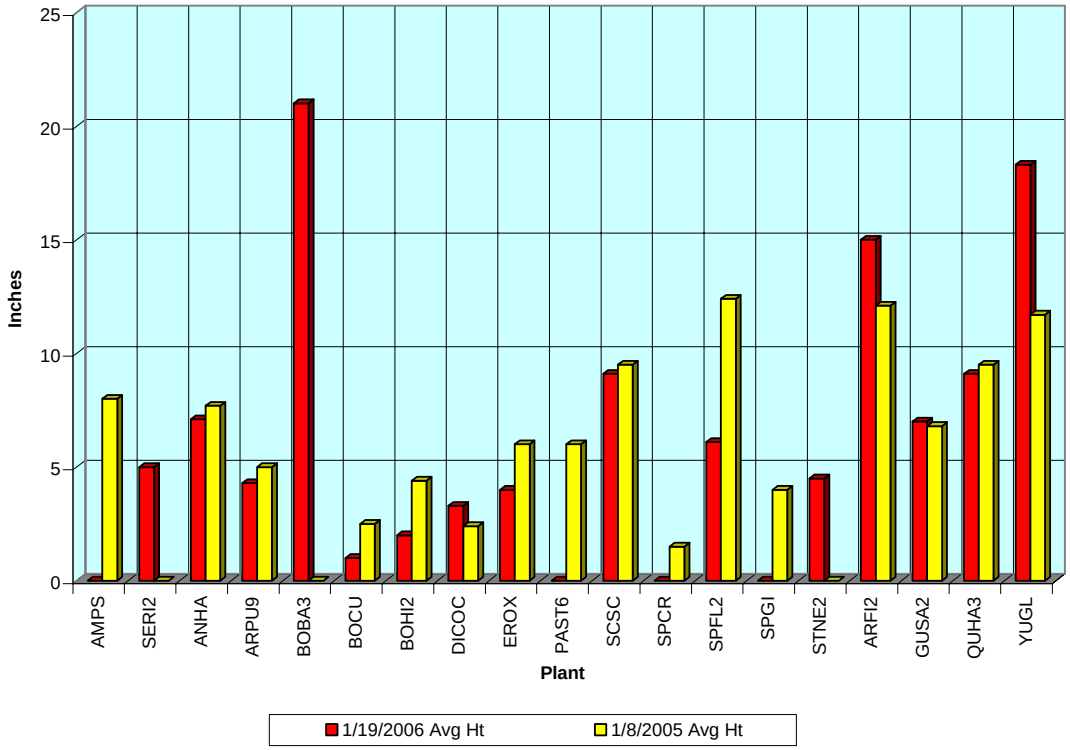
Primary Obstructions	**61008-#14-A178**	**61008-#14-A178**
	01/19/2006	**01/08/2005**
Flag Stations	7	10
	% Hits	% Hits
BGROUND	13.3 %	21.3 %
LITTER	41.3 %	50.7 %
ARFI2	1.3 %	1.3 %
GUSA2	1.3 %	0.0 %
QUHA3	8.0 %	4.0 %
YUGL	1.3 %	1.3 %
ANHA	5.3 %	2.7 %
ARPU9	5.3 %	0.0 %
BOCU	1.3 %	0.0 %
BOHI2	0.0 %	1.3 %
DICOC	8.0 %	2.7 %
SCSC	10.7 %	12.0 %
SPCR	0.0 %	1.3 %
SPFL2	2.7 %	1.3 %

Secondary Obstructions	**61008-#14-A178**		**61008-#14-A178**	
	01/19/2006		**01/08/2005**	
	Percent	Avg Ht	Percent	Avg Ht
AMPS	0.0	0.0	2.7	8.0
ANHA	22.7	7.1	29.3	7.7
ARFI2	20.0	15.0	14.7	12.1
ARPU9	12.0	4.3	14.7	5.0
BOBA3	1.3	21.0	0.0	0.0
BOCU	1.3	1.0	1.3	2.5
BOHI2	5.3	2.0	5.3	4.4
DICOC	8.0	3.3	9.3	2.4
EROX	2.7	4.0	1.3	6.0
GUSA2	4.0	7.0	5.3	6.8
PAST6	0.0	0.0	1.3	6.0
QUHA3	61.3	9.1	82.7	9.5
SCSC	53.3	9.1	38.7	9.5
SERI2	1.3	5.0	0.0	0.0
SPCR	0.0	0.0	2.7	1.5
SPFL2	16.0	6.1	20.0	12.4
SPGI	0.0	0.0	1.3	4.0
STNE2	1.3	4.5	0.0	0.0
YUGL	5.3	18.3	6.7	11.7

Plant Composition



Plant Average Visual Obstruction Height



Plant Type Average Visual Obstruction Height